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| APPLICATION NO.                                                                                                 | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------------------------------------------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/619,419                                                                                                      | 07/16/2003  | Jonathan D. Barry    | 866.42812X00        | 7343             |
| 20457                                                                                                           | 7590        | 05/05/2004           | EXAMINER            |                  |
| ANTONELLI, TERRY, STOUT & KRAUS, LLP<br>1300 NORTH SEVENTEENTH STREET<br>SUITE 1800<br>ARLINGTON, VA 22209-9889 |             |                      | TRAN, THUY V        |                  |
|                                                                                                                 |             |                      | ART UNIT            | PAPER NUMBER     |
|                                                                                                                 |             |                      | 2821                |                  |

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application N .</b> | <b>Applicant(s)</b> |  |
|                              | 10/619,419             | BARRY ET AL.        |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | THUY V. TRAN           | 2821                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-16 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                              |                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1 sheet</u> . | 6) <input type="checkbox"/> Other: _____                                                |

### **DETAILED ACTION**

This is a response to the Applicants' filing on 7/16/2003. Claims 1-16 are currently pending in the instant application.

#### ***Inventorship***

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

#### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 7/16/2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

#### ***Drawings***

3. The drawings submitted on 7/16/2003 are accepted.

#### ***Claim Objections/ Minor Informalities***

4. Claims 5 and 13 are objected to because of the following informalities:

Claim 5, line 3, "the" (first occurrence) should be deleted; and

Claim 13, line 3, "the" (first occurrence) should be deleted.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al. (U.S. Patent No. 6,661,183) in view of Kang (Pub. No.: US 2003/0057841 A1).

With respect to claim 1, Park et al. discloses, in Fig. 2, a microwave powered lamp comprising (1) a light reflective cavity [201], (2) an electrodeless bulb contained in the light reflective cavity from which light is emitted when the electrodeless bulb is excited by microwaves, (3) a magnetron for providing the microwaves for exciting the electrodeless bulb, (4) a waveguide [205] which couples the microwaves emitted by the magnetron to the light reflective cavity for exciting the electrodeless bulb, and (5) a magnetron control (see col. 3, lines 35-40 and 54-58) coupled to a detector, which causes the magnetron to be turned off when a level of the signal indicates the level of received microwaves exceeds a threshold (see col. 3, lines 35-40 and 54-58). Park et al. further discloses, in Fig. 2, (6) a detector [200] for detecting the microwaves that are not coupled to the bulb during operation of the magnetron and for outputting a signal indicative of a level of received microwaves (see col. 3, lines 35-40 and 54-58; col. 5, lines 14-17), and (7) a housing [206]. However, Park et al. does not teach that the housing [206] be containing both the lamp and the detector.

Kang discloses, in Fig. 2, a microwave-powered lamp [120] comprising a housing [116, 102, 101, 121], which encloses all the lamp components therein.

Art Unit: 2821

It would have been obvious to one of ordinary skills in the art at the time of the invention to implement the microwave-powered lamp of Park et al. by extending the housing of Park et al. so as to enclose all the lamp components therein such as the lamp, the detector, etc. to protect all the lamp components from environmental effects since such an arrangement of the housing for the stated purpose has been well known in the art as evidenced by the teachings of Kang (see Fig. 2).

*Allowable Subject Matter*

7. Claims 9-16 are allowed. Note that claim 13 must be corrected to overcome the objection set forth in this Office Action.

8. Claims 2-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Note that claim 5 must be corrected to overcome the objection set forth in this Office Action.

9. The following is a statement of reasons for the indication of allowable subject matter:

Prior art fails to disclose or fairly suggest:

- A microwave powered lamp wherein the detector comprises an electrical field probe disposed in the waveguide at a location which produces a response to microwaves not coupled to the bulb sufficient to detect when the bulb is not ignited during magnetron operation, in combination with the remaining claimed limitations as called for in claim 2 (claims 3 and 6-7 are also allowable since they are dependent on claim 2);

Art Unit: 2821

- A microwave powered lamp wherein the detector comprises an antenna located within the housing which receives spurious microwaves leaking from any of at least one of the magnetron, waveguide or light reflective cavity which produces a response to the spurious microwaves sufficient to detect when the electrodeless bulb is not ignited during magnetron operation, in combination with the remaining claimed limitations as called for in claim 4 (claim 8 is also allowable since it is dependent on claim 4);
- A microwave powered lamp wherein the magnetron control comprises a power supply of the magnetron and electrical power from the power supply to the magnetron is reduced when the signal indicates the level of received microwaves exceeds the threshold for a set period of time, in combination with the remaining claimed limitations as called for in claim 5; and
- A method of control of a microwave powered lamp comprising the steps of (1) providing a signal from the detector indicative of a level of detected microwaves, and (2) the magnetron control reduces power to the magnetron when a level of the signal indicates the level of the detected microwaves exceeds a threshold, in combination with the remaining claimed limitations as called for in independent claim 9 (claims 10-16 are also allowed since they are dependent on claim 9).

*Citation of relevant prior art*

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Ury et al. (U.S. Patent No. 5,866,990) discloses a microwave-powered lamp.

Art Unit: 2821

Prior art Ury et al. (U.S. Patent No. 5,847,517) discloses a method and apparatus for igniting an electrodeless lamp.

Prior art Turner et al. (U.S. Patent No. 5,811,936) discloses a microwave-powered lamp.

***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THUY V. TRAN whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:30 AM-6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DON K. WONG can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

THUY V. TRAN  
Examiner  
Art Unit 2821

05/01/2004

